

REMARKS

Upon entry of this amendment, which amends claims 1, 14-17 and 20 and cancels claims 18 and 30, claims 1, 13-17, 19-24, 29 and 31-34 remain pending. In the October 24, 2002 Office Action, claims 1, 13-24 and 29-34 were rejected under 35 U.S.C. § 112 ¶2, as being indefinite. Claims 1, 13-23 and 29-33 were rejected under 35 U.S.C. § 102(b), as being anticipated by U.S. Patent No. 5,414,894 Bisaro et al. (hereinafter referred to as “Bisaro et al.”). Finally, claims 24 and 34 were rejected under 35 U.S.C. § 103(a), as being unpatentable over Bisaro et al in view of U.S. Patent No. 3,742,318 to Yamashita (hereinafter referred to as “Yamashita”). Applicant respectfully requests reconsideration of the claims in view of the above amendments and the comments below.

35 U.S.C. § 112 ¶2, Rejections – Claims 1, 13-24 and 29-34

In the Office Action, claims 1, 13-24 and 29-34 were rejected under 35 U.S.C. § 112 ¶2, as being indefinite. With respect to the rejection of claim 1 in particular, use of the terms “thin layer”, “in integral manner” and “stress-giving structure” were objected to. Additionally, claim 1 was objected to for not being formatted in proper Markush format. In response, Applicant objects that use of the term “thin layer” is indefinite. The word “thin” is a term of art that is often used in semiconductor materials processing. (As an example, see col. 12, l. 40 in claim 1 of U.S. Patent No. 6,242,324 to Kub et al., which is a reference cited by the Examiner qualifying a term that is often used in the art.) The remaining indefiniteness rejections to claim 1 have been addressed. In light of the

foregoing, Applicant respectfully requests that the § 112 rejection of claim 1 be withdrawn.

With respect to the rejection of claim 13, use of the term “this interface” was objected to for lacking antecedent basis. In response, Applicant has amended claim 13 so that there is no longer an antecedent basis problem. Applicant respectfully requests, therefore, that the § 112 rejection of claim 13 be withdrawn.

With respect to claim 14, the term “hydrophilia” was objected to as not being an actual word and having no art accepted meaning. In response, Applicant has corrected the spelling of this term. The term should read “hydrophilic”, which is an actual word having an art accepted meaning. (The typographical error likely was generated during translation of the specification from French to English.) Applicant respectfully requests, therefore, that the § 112 rejection of claim 14 be withdrawn.

With respect to claim 17, the phrase “made up of non-homogeneities able to relax stresses”. Claim 17 has been amended in this response, and no longer contains the “it is made up” language. Applicant respectfully requests, therefore, that the § 112 rejection of claim 17 be withdrawn.

With respect to claims 18 and 30, the term “bonding interface” was objected to as being indefinite. Because claims 18 and 30 have been rejected in this response, the § 112 rejections of these claims are now moot. Applicant respectfully requests, therefore, that the § 112 rejections of claims 18 and 30 be withdrawn.

With respect to claim 20, the phrase “insertion of a foreign element” was objected to as being indefinite. Claim 20 has been amended in this response in a manner that

Applicant believes removes any ambiguity. Applicant respectfully requests, therefore, that the § 112 rejection of claim 20 be withdrawn.

35 U.S.C. § 102(b) Rejections – Claims 1, 13-23 and 29-33

In the Office Action, claims 1, 13-23 and 29-33 were rejected under 35 U.S.C. § 102(b), as being anticipated by Bisaro et al. For the following reasons, Applicant respectfully disagrees.

Bisaro et al. discloses the creation of, by ion or proton implantation, either anchoring points for the dislocations preventing their spread towards the surface or zones of stresses enabling the curvature of the dislocations, or an amorphous zone.... (see col. 2, ll. 14-20). However, Bisaro et al. does not disclose the formation of a microcavity layer by ionic implantation. Implanting ions does not imply necessarily the creation of microcavities. Microcavities are obtained with perfectly determined ion dose and energy. Furthermore, Bisaro et al. teaches away from *relaxing* dislocations. It teaches the *prevention* of dislocations.

Claims 13-17, 19-23, 29 and 31-33 all depend from independent claim 1. Accordingly, they derive patentability for depending on an allowable base claim. Applicant respectfully requests, therefore, that the § 102 rejection of claims 2 and 4 also be withdrawn. There are additional reasons, however, why these dependent claims are allowable over the cited prior art. For example, with respect to claim 13, Bisaro et al. does not disclose an interface bonding with controlled bonding energy. Contrary to what is stated in the Office Action, there is no bonding interface between the epitaxial growth layer 16 and the epitaxial growth layer 17 since it is just a resumption of epitaxy (see col.

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5, l. 20). Further, according to Bisaro et al., the ion implantation is not realized at the interfaces between layers but within the layer 16 to create a disturbed zone 15 (see col. 5, ll. 18-19 and Fig. 4d). This ion implantation aims at creating a zone limiting the spread of the dislocation. Bisaro et al. does not suggest that this implantation may have some effect on a surface roughness, as is asserted in the Office Action.

35 U.S.C. § 103(a) Rejections – Claims 24 and 34

In the Office Action, claims 24 and 34 were rejected under 35 U.S.C. § 103(a), as being unpatentable over Bisaro et al. in view of Yamashita. Claims 24 and 34 both depend from independent claim 1, which as explained above, is allowable over the prior art of record. The addition of Yamashita does nothing to alter this fact. Accordingly, claims 24 and 34 are believed to be also allowable over the prior art of record, and Applicant respectfully requests that the § 103 rejections of these claims be withdrawn.

CONCLUSION

In view of the foregoing, Applicant believes all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 408-282-1857.

Respectfully submitted,



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